LISTING OF CLAIMS

The claims in the application have not been amended in this response. They are presented below in clean form for the convenience of the Examiner.

1 (previously presented). A method for selecting a polarization of the laser beam inside a resonant laser cavity operating in Q-switching or Mode-Locking regime, which method provides generation of a laser beam inside said resonant laser cavity, comprising an electro-optical modulator and optical media, which include a wedge shaped birefringent optical medium, wherein said birefringent optical medium is used for inducing a double refraction effect on the laser beam and, on the interface between said birefringent optical medium and a second medium with a different refractive index, separating propagation directions of different polarization components of the laser beam, providing a plurality of resonance directions which are distinct for the different polarization components, and wherein an optical axis of the cavity is selectively aligned on one of said resonance directions through the adjustment of the position of one or more optical elements forming said resonant laser cavity so as to modulate the loss state of the resonant laser cavity in cooperation with the electro-optical modulator.

2 (canceled).

3 (canceled).

4 (previously presented). A method according to claim 1, wherein inside said resonant laser cavity the plurality of resonance directions corresponds to a plurality of different optical paths enabling a particular polarization.

5 (previously presented). A method according to claim 4, further comprising introducing a controlled quantity of losses individually experimented by one or both the polarizations in a well delimited path in the resonant laser cavity.

6 (canceled).

7 (previously presented). A method according to claim 4, wherein said resonant laser cavity contains a birefringent active laser material for producing the separated polarization components.

8 (previously presented). A method according to claim 4, wherein said resonant laser cavity contains a non linear crystal for producing the separated polarization components.

9 (previously presented). A method according to claim 4, wherein said resonant laser cavity contains a Q-switching or Mode-Locking optical modulator, whose birefringent active optical element is used for producing the separated polarization components.

10 (previously presented). A method according to claim 1, wherein more than one interface is used between the birefringent medium and another medium for separating the polarizations.

11 (canceled).

12 (previously presented). A method according to claim 1 further comprising selecting the polarization through the alignment of a mirror pertaining to the optical media of said resonant laser cavity.

13 (previously presented). A method according to claim 1, further comprising verifying the resonance of a polarization and avoiding total extinction of other possible polarizations.

14 (previously presented). A method according to claim 1, further comprising verifying the resonance of a polarization and maintaining simultaneous oscillation of a well controlled fraction of other possible polarizations.

15 (previously presented). A laser system operating in Q-switching or Mode-Locking regime of the type comprising a laser beam generated in a resonant laser cavity, said resonant laser cavity comprising an electro-optical modulator, and optical media, which include a wedge shaped optical medium with birefringence properties, wherein said wedge shaped optical medium with birefringence properties produces a double refraction for polarized components of said beam and multiple resonance conditions of the resonant laser cavity, and wherein said resonant laser cavity is aligned in one of said resonance directions by means of one or more optical elements forming it, for selecting a specific polarization component.

16 (previously presented). A laser system according to claim 15, wherein said resonant laser cavity contains a birefringent mirror, comprising birefringent material with first

and second non parallel faces, said first face being disposed inside the resonant laser cavity and said second face comprising a mirror, said first face being angled with respect to the second, in a position to operate the separation process of the polarizations, and select them on the desired resonance position through the alignment of the mirror itself, or any another optical element of the resonant laser cavity.

17 (previously presented). A laser system according to claim 15, wherein said cavity contains an active birefringent mirror, consisting of birefringent material with first and second non parallel faces, said first face disposed inside the cavity and said second face comprising a mirror and disposed in a position to operate the separation process of the polarizations, and select them on the desired resonance position through the alignment of the mirror itself or any other optical element of the resonant laser cavity, and at the same time provide a laser gain to the resonant laser cavity.

18 (previously presented). A laser system according to claim 15, wherein said cavity contains a birefringent device, comprising birefringent material with non parallel first and second faces, the first face being angled with respect to the second face in a position to operate the separation process of the polarizations, and their selection by means of rotation around one of its own axis or realignment of any other optical element of said resonant laser cavity.

19 (previously presented). A laser system according to claim 16 wherein the birefringent material is YLF or Nd:YLF or $GdVO_4$ or YVO_4 or Nd:$GdVO_4$ or Nd:YVO_4.

20 (canceled).

21 (previously presented). A discrete element solid state laser resonator, containing an electro-optical Q-switching modulator, in which modulation of the loss state of the cavity is obtained through the combined effect of the electro-optical modulator and selection of the polarization determined through a wedge shaped birefringent medium.

22 (previously presented). A discrete element solid state laser resonator, operating in Mode-Locking regime, in which modulation of the loss state of the cavity is obtained with the cooperation of an electro-optical modulator and a wedge-shaped birefringent medium operating a selection of the polarization.

23 (previously presented). A laser system according to claim 17 wherein the birefringent material is YLF or Nd:YLF or $GdVO_4$ or YVO_4 or Nd:$GdVO_4$ or Nd:YVO_4.

24 (previously presented). A laser system according to claim 18 wherein the birefringent material is YLF or Nd:YLF or $GdVO_4$ or YVO_4 or Nd:$GdVO_4$ or Nd:YVO_4.